

Table 3. Summary of [TEAP](#) layers.

Criterion	Indicator	Description	Data Source	Analysis Unit	Analysis Resolution	Pixel Scoring
Diversity	Shannon land cover diversity index	<ol style="list-style-type: none"> 1. Shannon Diversity Index 2. Considers both richness (# of different specific land cover types) and evenness (dispersion of cover types) 3. Undeveloped land cover types only 4. Relative land cover diversity within ecoregions 	NLCD , Bailey's ecoregions	ecoregion	1 km	continuum, exponential distribution
	Land cover appropriateness	<ol style="list-style-type: none"> 1. Evaluation of land cover type currently present (c. 1993) relative to potential dominant vegetation native to the area as an appropriateness factor of measured diversity 2. Comparison of NLCD land cover and PNV 	NLCD , PNV	Texas	30 m	0/1
	Contiguous size of undeveloped land	<ol style="list-style-type: none"> 1. Selection of largest contiguous non-developed areas based on principle that larger non-developed areas favor diversity 2. All undeveloped cover types that are adjacent form one polygon 	NLCD , Bailey's ecoregions	ecoregion	1 km	continuum, exponential distribution
*	Ecologically significant stream segments	<ol style="list-style-type: none"> 1. Relates health of waterways relative to pristine conditions of water quality, habitat quality, and occurrence of health indicator aquatic species 	TPWD	Texas	stream segments	0/1
**	Temperature and precipitation maxima	<ol style="list-style-type: none"> 1. Based on assumption that higher temperatures and greater precipitation favors diversity 		ecoregion	meteorological bands	0/1

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Rarity	Vegetation rarity	1. Determination of which land cover type is the rarest	NLCD	ecoregion	30 m	continuum, log distribution
	Natural heritage rank	1. G1 , G2 , G3 , S1 , S2 , and S3 occurrences	BCD	7.5 minute quadrangle	point observations	continuum, exponential distribution
	Rare species richness	1. The number of species rated as G1 -3 2. The number of observations associated with each species	BCD	7.5 minute quadrangle	point observations	continuum, exponential distribution
	Taxonomic richness	1. The number of species rated as G1 -3 2. The number of broad taxonomic groups represented	BCD	7.5 minute quadrangle	point observations	continuum, exponential distribution
Sustainability: Fragmentation	Contiguous land cover type	1. Selection of largest contiguous areas by specific land cover type 2. Based on the principle that larger areas having similar ecosystem types have greater sustainability 3. Each undeveloped land cover type is a separate polygon 4. Only polygons ≥ 10 ha considered	NLCD , Bailey ecoregions	ecoregion	30 m	continuum, exponential distribution
	Appropriateness of land cover	1. Comparison of NLCD land cover with PNV 2. Evaluation of land cover type currently present (c.1993) relative to potential dominant native vegetation as an indicator of resilience and the likelihood of sustainability (seed bank) of the corresponding ecosystems	NLCD , PNV	Texas	30 m	0/1

Criterion	Indicator	Description	Data Source	Analysis Unit	Analysis Resolution	Pixel Scoring
	Road density	<ol style="list-style-type: none"> 1. Roads fragment the landscape 2. Road density index applied to TIGER road data set considers the total road lengths of different road classifications, classification of 1 km cells into road density ranges 	TIGER	1 km cells	1 km	continuum, exponential distribution
	Regularity of ecosystem boundaries	<ol style="list-style-type: none"> 1. Selection of contiguous areas possessing the smoothest or least irregular boundaries (i.e., lowest PAR by land cover) 2. Based on the principle that the least amount of boundary results in the lowest amount of “edge effect” thereby yielding the least disturbance or greatest sustainability of the interior ecosystems 3. Only polygons ≥ 10 ha considered 	NLCD , Bailey’s ecoregions	ecoregion	30 m	continuum, exponential distribution
	Waterway obstruction	<ol style="list-style-type: none"> 1. Dam density per watershed (normalized by stream miles) 2. Dams and the corresponding reservoirs are interruptions (fragmentation) to the continuities of waterways 	TCEQ , USGS	8-digit HUC	HUC	continuum, log distribution
**	Waterway impoundment	<ol style="list-style-type: none"> 1. Selection of reservoirs for downgrading 2. Intersection of NLCD open water class and STORET dam locations 	STORET	Region 5	30 m	0/-1

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Sustainability: Stressors	Airport noise	<ol style="list-style-type: none"> 1. The zone of disturbance surrounding airports are directly related to the sizes of the airplanes using them. 2. Airplane sizes are directly related to airport runway lengths. 3. The extent of the zone of disturbance is directly related to the runway length. 	Bureau of Transportation Statistics runway length	airport	site or runway length w/ buffer	runway w/buffer
	NPL sites (Superfund) & state Superfund sites	<ol style="list-style-type: none"> 1. Un-owned sites where hazardous waste was released to the environment and which were in the formal clean-up process 	CERCLIS data, TCEQ	Texas	site w/buffer	0/1
	RCRA TSD , corrective action, and state VCP sites	<ol style="list-style-type: none"> 1. Owned sites where hazardous waste was released to the environment and which were in the formal clean-up process 	RCRIS data, TCEQ	Texas	facility w/buffer	0/1
	Air quality	<ol style="list-style-type: none"> 1. Nonattainment and state near nonattainment areas 	EPA green book, TCEQ	county	county	0/0.5/1
*	Urban/agricultural disturbance	<ol style="list-style-type: none"> 1. Activities in urban & agricultural areas generate disturbances to surrounding areas. 2. Takes into account stressors such as pesticides, fertilizers, and noise 	NLCD	Texas	30 m	0/1

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	Water quality	<ol style="list-style-type: none"> 1. Ambient levels of total suspended solids, dissolved oxygen, and ammonia based on modeling of 1990-1994 NPDES permitted discharges levels 2. Status of water quality use support, including waters identified as impaired, with water quality concerns, or fully meeting uses 3. Only use support pertaining to aquatic life is included (includes depressed dissolved oxygen, pH extremes, ambient toxicity, elevated heavy metals, and nutrient or sediment quality concerns) 	TCEQ CWA 303(d) list	Texas	stream	0/1

*addition/modification to [CrEAM](#)

**deletion from [CrEAM](#)